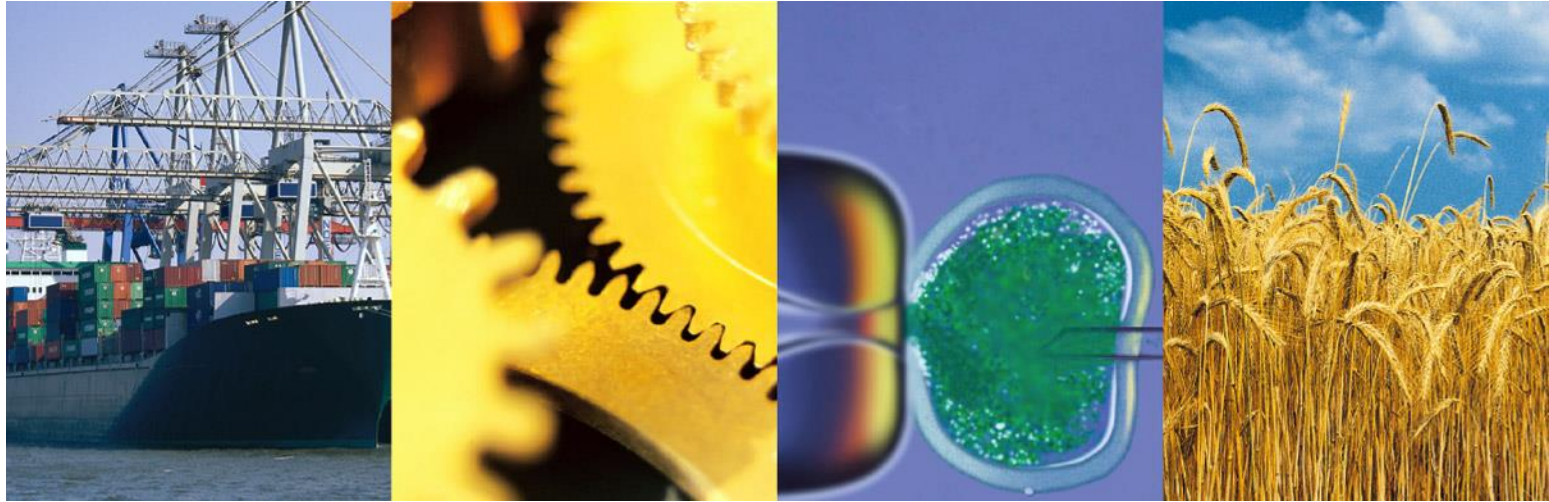


ISO TC68/SC7/TG1 and W3C



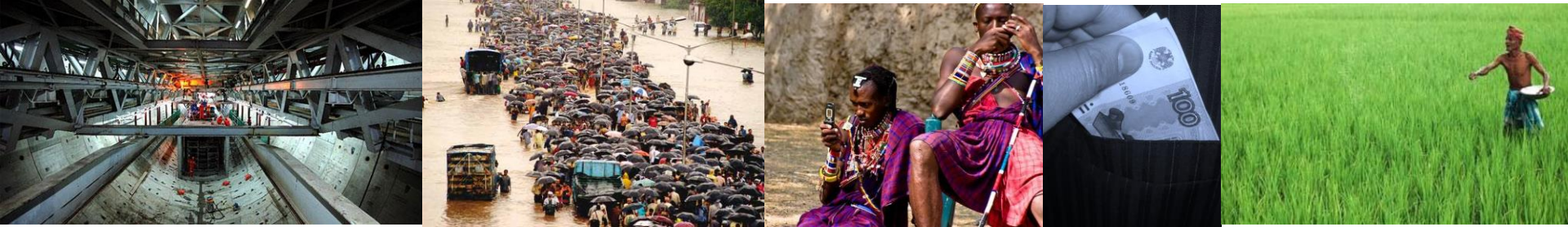
W3C Web Payments Interest Group

Lisbon, 19-23 September 2016

William Vanobberghen

ISO TC68/SC7/TG1 Convenor

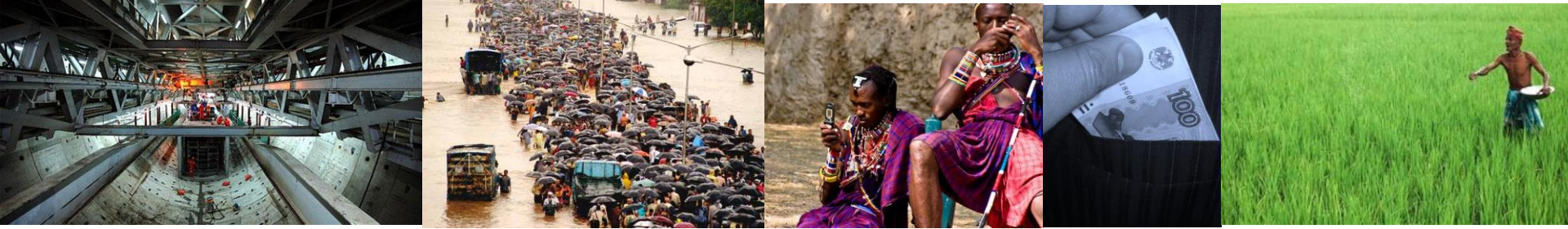
Agenda



ISO TC68/SC7/TG1 and W3C

- ISO 20022
- ISO TC68 and Card Payments
- ISO 20022 Card Payments Value Chain
- W3C and ISO TC68/SC7/TG1
- The Way Forward

ISO 20022



- What is ISO 20022?
- ISO 20022 Standard
- ISO 20022 – Definition of a Component
- Benefits of ISO 20022
- Why ISO 20022?

What is ISO 20022?

■ A UNIVERSAL STANDARD

- ISO 20022: a universal standard covering the whole financial value chain (forex, trade, payments, card payments and now withdrawals)

■ A COMMON REPOSITORY

- All messages and their components are part of a common repository
- Consistency among all messages of this financial value chain (and not only payments and cash withdrawals)

■ AN INNOVATIVE MODELLING APPROACH

- Modelling ensures the proper mapping between business needs and messages

■ A REGULATORY SUPPORT

- Strong backing from the European Commission, the European Central Bank and the US Federal Reserve

ISO 20022 Standard

The current edition of the standard includes eight parts (published in May 2013):

- ISO 20022-1: Metamodel
- ISO 20022-2: UML profile
- ISO 20022-3: Modelling
- ISO 20022-4: XML schema generation
- ISO 20022-5: Reverse engineering
- ISO 20022-6: Message transport characteristics
- ISO 20022-7: Registration
- ISO 20022-8: ASN.1 generation

ISO 20022 Definition of a Component (1/2)

Card	[1..1]	Card or payment token performing the transaction.
ProtectedCardData	[0..1]	Sensitive data of the card or payment token encrypted with a cryptographic key.
ContentType	[1..1]	<i>CodeList</i> Type of data protection. Allowed value: <i>EnvelopedData</i> Encrypted data, with encryption key (ASN.1 Object Identifier: id-enveloped-Data).
EnvelopedData	[1..1]	Encrypted data with encryption key using a session key. <i>see section "Message Security"</i>
PlainCardData	[0..1]	Sensitive data associated with the card or payment token performing the transaction.
PAN	[1..1]	<i>Min8Max28NumericText</i> Primary Account Number (PAN) of the card, or surrogate of the PAN by a payment token. ISO 8583 bit 2.
CardSequenceNumber	[0..1]	<i>Min2Max3NumericText</i> Distinguishes between different instances of the same payment card or token ISO 8583 bit 23.
EffectiveDate	[0..1]	<i>Max10Text</i> Date from which the card can be used, expressed either in the YYYY-MM format, or in the YYYY-MM-DD format. ISO 8583 bit 13.
ExpiryDate	[0..1]	<i>Max10Text</i> Expiry date of the card or the payment token expressed either in the YYYY-MM format, or in the YYYY-MM-DD format. ISO 8583 bit 14.
ServiceCode	[0..1]	<i>Exact3NumericText</i> Services attached to the card, as defined in ISO 7813. ISO 8583 bit 40.

ISO 20022 - Definition of a Component (2/2)

	PaymentAccountReference	[0..1]	<i>Max35Text</i> A unique non-financial reference assigned to a given PAN. May be used to link the transaction activity for that PAN..
	PANReferenceIdentifier	[0..1]	
	IssuerIdentificationNumber	[0..1]	<i>Max15NumericText</i> Card issuer identifier for routing purpose. ISO 7812
	CardCountryCode	[0..1]	<i>Max3Text</i> Country code assigned to the card by the card issuer. ISO 8583:2003 bit 20.
	CardCurrencyCode	[0..1]	<i>Exact3AlphaNumericText</i> Currency code of the card issuer (ISO 4217 numeric code).
	CardProductType	[0..1]	<i>Max35Text</i> Type of card product.
	CardProductSubType	[0..1]	<i>Max35Text</i> Subtype of card product.
	InternationalCard	[0..1]	<i>TrueFalseIndicator</i> True if the card may be used abroad.
	AllowedProduct	[0..*]	<i>Max70Text</i> Product that can be purchased with the card.
	ServiceOption	[0..1]	<i>Max35Text</i> Options to the service provided by the card.
	AdditionalCardData	[0..1]	<i>Max70Text</i> Additional card issuer specific data.

Benefits of ISO 20022

- **INTEROPERABILITY**

- Common protocol independently of a manufacturer, a card scheme, etc.
- Message Usage Guide (MUG) to reduce the risk of non-interoperable implementations

- **STATE-OF-THE-ART STANDARD**

- Open ISO 20022 vs. Proprietary specifications based on ISO 8583
- Modelling approach in the design of the messages
- Single repository for all ISO 20022 messages (available on-line)
- Consistency with all other ISO 20022 payment messages (cards and non cards)

- **VALUE-ADDED APPROACH**

- Kiosk, invoice payments, instant money transfers, vouchers, etc.

- **UNIVERSALITY**

- Unique, common series of protocols endorsed by ISO at worldwide level

Why ISO 20022?

■ SUPPORT TO VALUE-ADDED SERVICES

- The fast emergence of new value-added services requires a new approach in today's standardisation

■ ROYALTY-FREE

- All messages and their components are free of usage by any implementer
- Message Usage Guides (MUG) to enforce interoperability between implementations

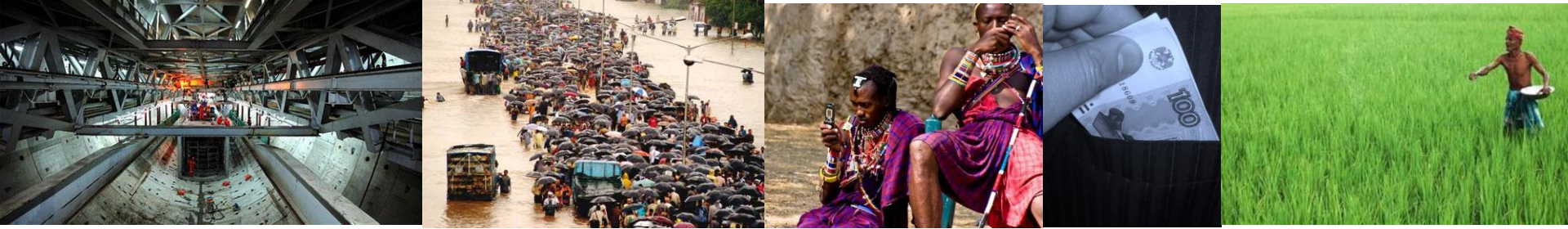
■ OPEN, TRANSPARENT AND EVOLUTIVE

- Any entity capable of proposing changes and evolution of ISO 20022 standards

■ ENABLER OF CONVERGENCE

- Relying on the same technology, convergence with ISO 20022 SCT, SDD and now all ISO 20022 card payment messages

ISO TC68 and Card Payments



- Structure of ISO TC68 for Card Payments
- CAPE
- ATICA
- Value Chain of Card Payments
- ISO 20022 Card Payments Today

Structure of ISO TC68 for Card Payments

ISO TC68

Scope:

Financial services

Standardization in the field of banking, securities and other financial services

ISO TC68/SC2

Financial services – Security

ISO TC68/SC7

Financial services – Core banking

ISO TC68/SC7/TG1

Financial services – Core banking – Card standards

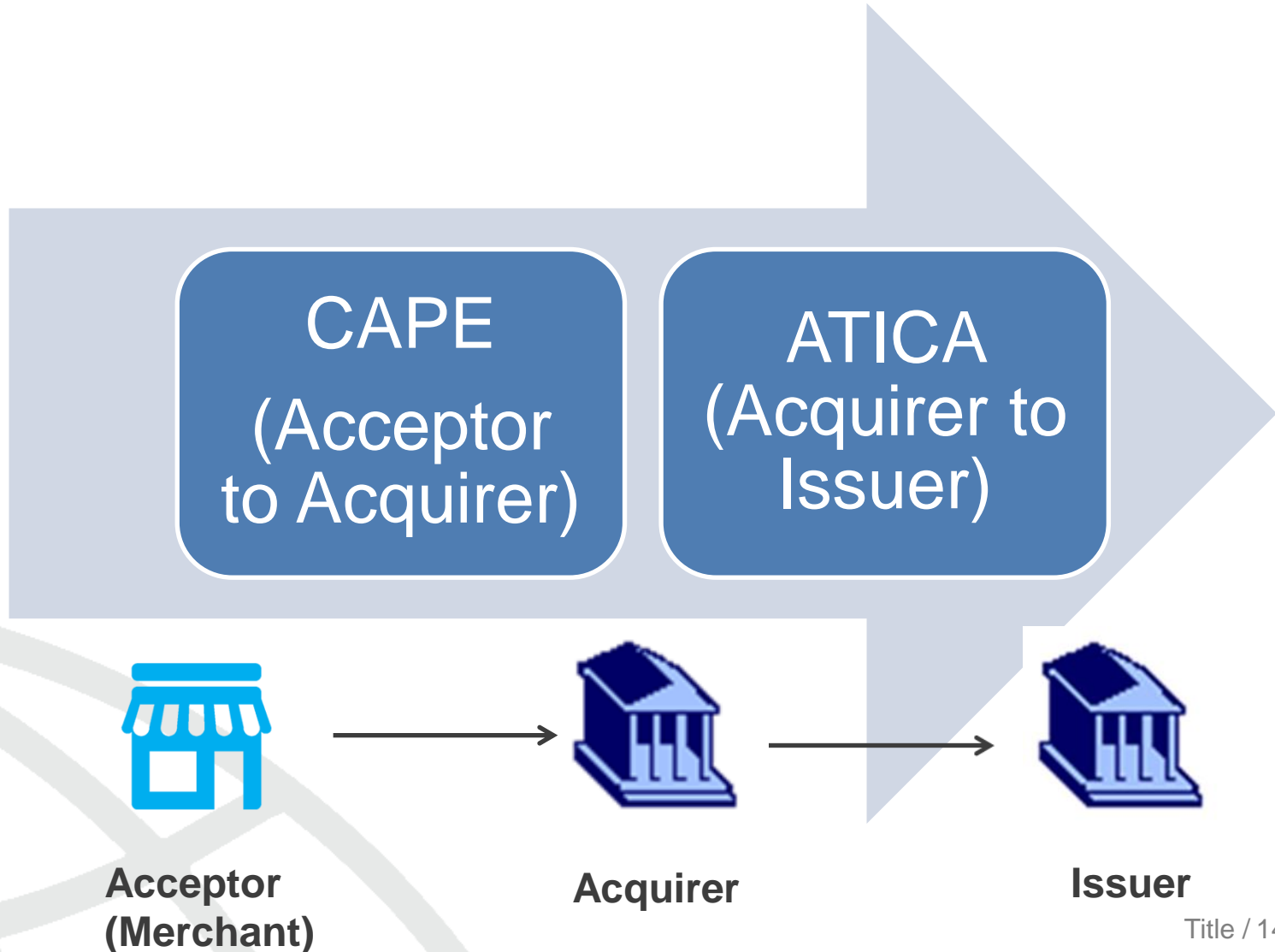
CAPE

- An ISO 20022 standardisation project initiated by EPASOrg (now nexo) with the active contribution of most major actors of the industry
- Specifications covering the acceptor (Merchant)-to-acquirer card payment domain
- An initiative ensuring compliance with existing ISO 8583 specifications
- An open standard to ensure interoperability and competition between actors, especially retailers
- A standard currently implemented by major retailers such as Total, Carrefour, Auchan and deployed in different European countries (France, Germany, Spain and Portugal)

ATICA

- An ISO 20022 standardisation project initiated by ISO TC68/SC7 under the leadership of TG1 with the participation of Global and Domestic Networks
- Specifications covering the acquirer-to-issuer card payment domain
- An initiative ensuring compliance with existing ISO 8583 specifications and which will replace those specifications
- A methodology already used successfully for the terminal-to-acquirer (CAPE) and card clearing domains
- A longer term replacement of today's ISO 8583 standards
- An open standard to ensure interoperability and competition between actors

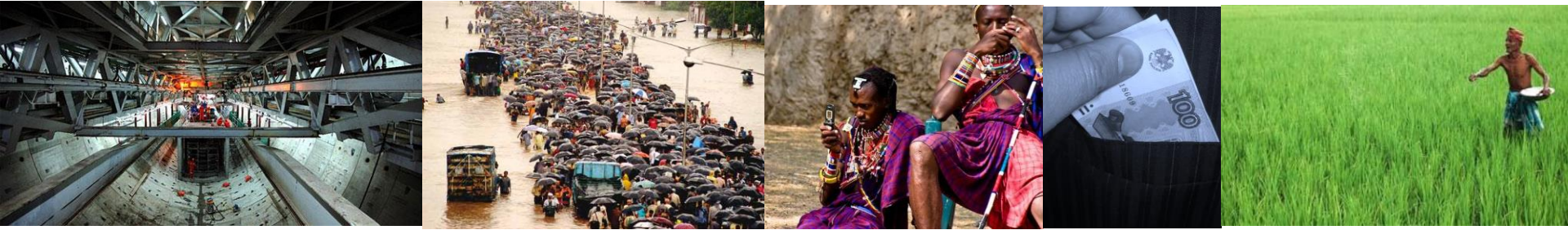
Value Chain of Card Payments



ISO 20022 Card standards today

- ISO 20022 terminal-to-acquirer standards becoming a prerequisite for international merchants
- Acquirers do adapt their strategy to meet those customers requirements through:
 - A conversion gateway (by maintaining the same legacy interfaces in a temporary phase of operations) or;
 - Migrating their applications directly to the new standards
- ISO 20022 acquirer-to-issuer standards to ensure the same continuation of service through a common protocol (ATICA)
- ISO 20022 card clearing standards to “close the loop” of the whole card payment value chain

W3C and ISO TC68/SC7/TG1



- Share Commonalities
- Rationale for a Potential Cooperation
- ISO 20022 Harmonization Task Force
- W3C and ISO TC68/SC7/TG1 On-going Efforts

Share Commonalities

- **Open Standard**

- Both W3C and ISO 20022 sharing the same objectives of openness and universality

- **Royalty-free approach**

- No royalty for implementing ISO 20022 standard or W3C standards

- **Involvement of all actors**

- No restriction on the involvement of actors

- **Independency of any specific industry**

- Meeting the requirements of the global industry

Rationale for a potential cooperation

▪ Complementary work

- W3C addressing Web-related card payment developments
- ISO TC68/SC7/TG1 addressing today's card payments implementations
- W3C Liaison Member of ISO TC68/SC7/TG1

▪ Common denominator

- JSON Study Group set up under ISO 20022 to examine the opportunity to adopt JSON as an alternative coding syntax to XML

▪ API and Messages

- W3C focusing on the development of APIs to be used in a complementary way and as interfaces to ISO 20022 messages

ISO 20022 Harmonization Task Force

▪ ISO 20022 Repository

- Message and message components are part of a central ISO 20022 Repository
- This repository contains most elements needed to build financial messages and, potentially, APIs
- Harmonization to ensure consistency between the definition of ISO 20022 messages and W3C APIs involving Web-related applications

▪ JSON

- Pending conclusions of the JSON Study Group; W3C and ISO 20022 could possibly use the same language for APIs and messages (as an alternative to XML)

W3C and ISO TC68/SC7/TG1 On-going Efforts

- **Join efforts due to the effective collaboration of:**
 - **Lauren Jones:** official liaison between W3C and ISO 20022 RMG
 - **David Ezell:** W3C Web Payments Interest Group Co-chair and X9 US Expert in TG1
 - **Kris Ketels:** ISO 20022 Harmonisation Task Force Leader
 - **Ian Jacobs :** Head of W3C Payments Activity
 - **William Vanobberghen :** W3C Member and ISO TC68/SC7/TG1 Convenor

The Way Forward

- **Joint activities to be possibly carried out**
 - **Harmonization of W3C APIs and ATICA messages (ISO 20022 Harmonization Task Force)**
 - **JSON as a language for both W3C APIs and potentially ATICA messages (pending the outcome of the JSON Study Group and ISO 20022 RMG decision and as an alternative coding syntax to XML)**
 - **Exchange of information between W3C and ISO TC68/SC7/TG1 under the current Liaison between the two initiatives**
 - **Cooperation in identifying Web Payment Use Cases**
 - **Any other cooperation activities requiring expertise of both W3C and ISO TC68/SC7/TG1**

Thank you !

William VANOBBERGHEN

ISO TC68/SC7/TG1 Convenor